

Polar Gateways Arctic Circle Sunrise 2008 Conference
Barrow, Alaska, January 23-29, 2008
<http://polargateways2008.org/>

Abstract

**Contextualizing the Second International Polar Year:
Early Polar Aviation and Bergen School Meteorology**

Roger Turner

History and Sociology of Science Department
University of Pennsylvania

The Second International Polar Year was one of many polar research and exploration efforts organized during the 1920s and 1930s. Various funded by air ministries, national weather services, geographic societies, newspapers, universities, airlines and private adventurers, diverse expeditions collected meteorological observations to determine if the Arctic was a region fit for flying. Spectacular dirigible flights trumpeted the revolutionary capability of aircraft. Soon aircraft would wing over Arctic great circle routes, connecting the continents for commerce (and potentially for strategic bombing). Many of these flights depended upon weather knowledge produced by a small group of Scandinavian meteorologists trained by Vilhelm Bjerknes in Bergen, Norway. For Bergen School meteorologists, the Arctic was the source of the Polar Front, a key manifestation of the general circulation of the atmosphere. A confluence of three factors—Arctic living experience, athletic capability, and theoretical attention to the upper air—put the Bergen School at the center of Polar aviation during the 1920s and early 1930s. The worldwide attention generated by polar flight helped Harald Sverdrup, Sverre Pettersen, and Jorgen Holmboe launch internationally prestigious careers, and ultimately, to establish within American scientific institutions their vision of a computable atmosphere. Tracing the connections between aviation and IPY 2 thus reveals how (occasionally lethal) direct experiences of the Arctic climate contributed to meteorology's development into a simulational science, built around the virtual experience of weather.